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JOHN F HOFFMAN
BAKER & DANIELS
111 EAST WAYNE STREET
SUITE 800
FORT WAYNE, IN 46802

EXAMINER

ODLAND, DAVID E

ART UNIT

PAPER NUMBER

2662

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11

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary

Application No.

09/367,670

Applicant(s)

COVELEY ET AL.

Examiner

David Odland

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 March 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5, 7-13, 16 and 18-31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 7-13, 16 and 18-31 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☒ The proposed drawing correction filed on 05 March 2003 is: a) ☒ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☒ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

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DETAILED ACTION

Response to Amendment

1. The following is a response to the amendments filed on 02/03/2003.

Priority

2. Acknowledgment is made of applicant's claim for foreign priority based on an application filed in Canada on 12/18/1997. It is noted, however, that applicant has not filed a certified copy of the 2,225,227 application as required by 35 U.S.C. 119(b).

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

4. Claim 7 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 7 recites, "...said preprocessor..." in line 1. There is a lack of antecedent basis for this limitation in the claim.

Claims 8 and 21 are also rejected because they depend on claim 7.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

6. Claims 1-5, 7, 9-13, 20, 25-28 and 30 are rejected under 35 U.S.C. 102(a) as being anticipated by European Patent number 0 777 394 A1 to Belpaire, hereafter referred to as Belpaire.

Referring to claims 1, 10 and 30, Belpaire discloses a communication system comprising: at least two communication networks over which communications between physical devices connected to said communication networks are to be carried (two terminals communicate with each other over the Internet and a GSM network (see figure 1)) , said communication networks implementing different protocols for messaging (the internet is a land-line network and the GSM network is wireless (see figure 1)); and

a communication server acting between said communication networks and through which messages transmitted between said communication networks pass (a mail service gateway (MSG) is located between the two networks and the communications messages pass through it (see figure 3 and abstract)), said communication server including a knowledge base storing protocol conversion information (the MSG includes destination translating means (DTM) which accesses a translation table memory (TM) (see column 7 lines 20-59 and figure 1)), said communication server accessing said knowledge base upon receipt of a message (the DTM searches the TM for associated destination translation (see column 7 lines 20-59)), said communication server accessing said knowledge base upon receipt of a message and searching said knowledge base for appropriate protocol conversion information using a header accompanying said message or the message itself as a key to searching converting the protocol thereof to a protocol compatible with the communication network to which said message is being

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sent (the DTM uses the overhead information of a message as a key to search the TM for the appropriate translation address associated with the wireless terminal in the GSM network (see figure 1 and column 6 lines 1-18 and column 7 lines 20-59)).

Referring to claim 2, Belpaire discloses the system discussed above. Furthermore, Belpaire discloses that the communication server includes virtual devices communicating with said communication networks (the MSG inherently comprises receiving and transmitting devices that interface the terminals of the Internet and GSM networks (see figure 1)) and a virtual gateway bridging said virtual devices (the MSG acts as a gateway between the Internet and GSM networks (see figure 1)), said virtual gateway accessing said knowledge base and converting protocols of said messages (the MSG accesses the TM and converts the land-line Internet message to a wireless GSM message (see figure 1 and abstract)).

Referring to claim 3 and 11, Belpaire discloses the system discussed above. Furthermore, Belpaire discloses that the virtual gateway includes a preprocessor, a processor and a postprocessor (the MSG comprises a filter means F (preprocessor), destination translating means DTM (processor) and embedding means E (postprocessor) (see figure 1 and column 4 lines 45-59)), said preprocessor examining each incoming message and/or accompanying header if it exists to locate target logical connection information determining the target destination for said incoming message (the filter filters out the overhead information that indicates target destination information (see column 6 lines 10-18)), said processor converting the protocol of each incoming message (the DMT converts the message (see column 20-32)), if required for transmission to the communication network to which said message is being sent based on said target logical connection information, said postprocessor wrapping each message received from said processor

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with headers, where appropriate (the embedding means is used to complete the message to be outputted to the wireless network (see column 7 lines 20-59)).

Referring to claim 4, Belpaire discloses the system discussed above. Furthermore, Belpaire discloses that one of said communication networks is a wireless network (one network is a GSM network (see figure 1)) and wherein one of said communication networks is a wired land-line network (one network is the Internet).

Referring to claim 5, Belpaire discloses the system discussed above. Furthermore, Belpaire discloses that messages transmitted over said wireless network, include API messages to be processed by destination physical devices (the messages transmitted to the wireless terminals are email messages containing text and data objects such as figures, tables and pictures (see column 6 lines 19-27)) and logical message headers including target logical connection information specifying the destinations for said API messages that wrap said API messages (the messages contain addresses indicated which wireless terminal they are to be transmitted to (see column 7 lines 20-59)).

Referring to claim 7, Belpaire discloses the system discussed above. Furthermore, Belpaire discloses that the preprocessor strips the logical message header from the API message upon receipt of a message from the wireless network and uses the target logical connection information in the logical message header as a key to search the knowledge base for the protocol conversion information (the reverse process is performed for messages sent in the opposite direction (i.e. from wireless terminal to a landline terminal) (see column 8 lines 40-59 and column 9 lines 1-5)).

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Referring to claim 9, Belpaire discloses the system discussed above. Furthermore, Belpaire discloses that the messages transmitted over said land-line network are in the form of API messages (the messages transmitted over the Internet are email messages (see figure 1 and abstract)), said preprocessor analyzing the API message of a message received from said land-line network for said target logical connection information (the filter of the MSG separates the header information, which contains addressing information, from the message and sends it to the DMT (see column 6 lines 10-27)) and using the target connection information in said API message as a key to search said knowledge base for said protocol conversion information (the DMT uses the destination address to look up in the TM the associated wireless terminal address to convert the message into wireless form and send it to the wireless terminal (see column 7 lines 20-59)).

Referring to claim 12, Belpaire discloses the system discussed above. Furthermore, Belpaire discloses that the system includes a tool kit to setup said knowledge base with said protocol conversion information (inherently, the system comprises software and/or hardware to implement the TM so that the DMT can search for the necessary information (see figure 1 and column 7 lines 20-59)).

Referring to claim 13, Belpaire discloses the system discussed above. Furthermore, Belpaire discloses that the virtual gateway updates said protocol conversion information based on message traffic (inherently, since the gateway links the Internet and GSM networks and these are dynamic networks that grow and shrink in terms of the number of users/terminals, the gateway must have means for updating the translation information in the TM according to the traffic it receives from new users/terminals).

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Referring to claim 20, Belpaire discloses the system discussed above. Furthermore, Belpaire discloses that the messages transmitted over said land-line network are in the form of API messages (the messages from the landline terminal is an email message (see column 5 lines 52-59)), said preprocessor analyzing the API message of a message received from said land-line network for said target logical connection information (the filter means F filters out the destination address information to send it to the DMT (see column 6 lines 10-18)) and using the target logical connection information in said API message as said key (the DMT uses the destination address it receives from the filter in order to search the TM for the corresponding wireless terminals address (see column 7 lines 20-59)).

Referring to claim 25, Belpaire discloses a communication server acting as a gateway for the transmission of messages between two virtual devices communicating with networks implementing different protocols (an MSG acting as a gateway for two terminals communicating with two different network protocols (see figure 1)), said communication server comprising:

- a knowledge base storing protocol conversion information to convert messages of one protocol to a different protocol (the MSG comprises a TM for storing corresponding destination address information (see figure 1 and column 7 lines 20-59));

- a virtual gateway accessing said protocol conversion information upon receipt of a message to be transmitted between said virtual devices (the MSG retrieves the address translation information from the TM (see figure 1 and column 7 lines 20-59)) and converting the protocol of said message to a protocol compatible with the network to which said message is being sent (the MSG converts the messages between the wireless and landline protocols (see figure 1)); and

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a tool kit to set up said knowledge base with said protocol conversion information (inherently, the MSG contains software and/or hardware that implements the TM memory (see figure 1 and column 7 lines 20-59)).

Referring to claim 26, Belpaire discloses the system discussed above. Furthermore, Belpaire discloses that the virtual gateway updates said protocol conversion information based on message traffic there through (inherently, since the gateway links the Internet and GSM networks and these are dynamic networks that grow and shrink in terms of the number of users/terminals, the gateway must have means for updating the translation information in the TM according to the traffic it receives from new users/terminals).

Referring to claim 27, Belpaire discloses the system discussed above. Furthermore, Belpaire discloses that one of said networks is a wireless network and wherein another of said networks is a wired land-line network (one network is a GSM network (see figure 1)) and wherein one of said communication networks is a wired land-line network (one network is the Internet).

Referring to claim 28, Belpaire discloses the system discussed above. Furthermore, Belpaire discloses that the virtual gateway unwraps headers accompanying incoming messages (the MSG uses a filter F to unwrap header information (see column 6 lines 10-18)) and uses target logical connection information in the headers as keys to search said knowledge base for said protocol conversion information (the destination address in the header is used to look up the corresponding address of the wireless terminal that the message is being sent to (see column 7 lines 20-59)).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 16,18 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Belpaire.

Referring to claim 16, Belpaire discloses a communication system comprising:

a wireless network (a GSM network (see figure 1));

at least one wireless terminal to transmit messages over said wireless network (a wireless terminal that transmits messages over the GSM network (see figure 1));

a land-line network (the Internet (see figure 1));

at least one host computer connected to said land-line network to transmit messages over said land-line network; and

a communication server providing communications connectivity for messages to be transmitted from one network to the other (an MSG that provides connectivity between the networks (see figure 1)).

Belpaire does not explicitly disclose that the at least one wireless terminal and said communication server include registries, said registries including mapping information to map physically said at least one wireless terminal to said land-line network to enable messages transmitted by said at least one wireless terminal to be delivered to said a least one host computer, wherein the registry in said at least one wireless terminal maps drivers and ports of

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said wireless terminal to ports of said communication server. However, these are typical operations performed to enable a wireless terminal to communicate with the host computer in the landline network. Since, the wireless terminal of Belpaire communicate in the reverse direction with the landline host, it would have been obvious to one skilled in the art at the time of the invention to include registries contained the proper mapping information in the wireless terminals of Belpaire because such mapping is typically done and would be required in order for the messages from the wireless terminal to reach the proper host terminal.

Referring to claims 18, Belpaire discloses the system discussed above. Belpaire does not disclose that the registry in said communication server maps logical connections between said wireless and land-line networks. However, as discussed above such mapping is typically done and would be required in order for the messages from the wireless terminal to reach the proper host terminal, therefore it would have been obvious to one skilled in the art at the time of the invention to incorporate such operations into the system of Belpaire.

Referring to claims 19, Belpaire discloses the system discussed above. Furthermore, Belpaire discloses that the communication server includes a knowledge base storing protocol conversion information (the MSG includes a TM memory (see figure 1)), said communication server accessing said protocol conversion information in said knowledge base upon receipt of a message and (when the MSG receives a message it accesses the TM in order to retrieve the corresponding destination address of the terminal the message needs to be forwarded to (see figure 1 and column 7 lines 20-59)) converting the protocol thereof to a protocol compatible with the network to which said message is being sent (the MSG converts the landline message to a wireless message and vice versa (see columns 7 and 8)).

9. Claims 8, 21-24, 29 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Belpaire in view of Hyziak et al. (USPN 5,682,460), hereafter referred to as Hyziak.

Referring to claims 8, 21-24, 29 and 31, Belpaire discloses the system discussed above. Belpaire does not disclose that the preprocessor analyzes the API message of a message received from said wireless network for said target logical connection information if said target logical connection information cannot be determined from said logical message header and uses the target connection information in said API message as said key. In fact, Belpaire discloses that the incoming message is stripped down to its 'naked' form wherein all header information is sent to the DMT for destination address translation and the raw data is processed by processing means P (see column 6 lines 10-22). This system is flawed in that if the header information is corrupt and the destination address cannot be determined the raw data may be lost. However, Hyziak discloses of a system wherein packets are transmitted from landline terminals to wireless terminals and thus converted between each of them. Hyziak also discloses a packet format comprising a header, destination list, status and body (see figure 3). With a packet format such as this, if the destination ID cannot be obtained, due to corrupted data in the header, the system can use the destination address listed in the 'destination list' part of the packet. Therefore, it would have been obvious to one skilled in the art at the time of the invention to use, in the system of Belpaire, a packet format, as taught in Hyziak, in order to analyze messages received from the network if connection information cannot be determined from the message header, because doing so would give the system another place to look for the destination address if the header information of the received messages does become corrupt.

Response to Arguments

10. Applicant's arguments with respect to claims 1-19 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to David Odland, who can be reached at (703) 305-3231 on Monday – Friday during the hours of 8am to 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou, can be reached at (703) 305-4744. The fax number for the organization where this application or proceeding is assigned is (703) 872-9314.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist, who can be reached at (703) 305-4750.

deo

May 14, 2003

JOHN PEZZLO
PRIMARY EXAMINER

